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EXAMINER

MARKS, CHRISTINA M

ART UNIT PAPER NUMBER

3713

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Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/076,570

Applicant(s)

LU, LIEN-FU

Examiner

C. Marks

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 19 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Objections***

Claim 3 and those dependent therefrom are objected to because of the following informalities: The usage of a figure in a claim is not allowed. Appropriate correction is required.

Claims 1-8 are objected to under 37 C.F.R. §1.75(e) which states: "Where the nature of the case admits, as in the case of an improvement, any independent claim should contain in the following order: (1) A preamble comprising a general description of all the elements or steps of the claimed combination which are conventional or known, (2) A phrase such as "wherein the improvement comprises," and (3) Those elements, steps, and/or relationships which constitute that portion of the claimed combination which the applicant considers as the new or improved portion." The claims, as presented, are not in the proper form for being a claim that is drawn to an improvement of that which is old in the art.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and those dependent therefrom are indefinite in that one of ordinary skill in the art would not understand the positional relationship between the target and the target paper as described by the phrase "right in opposition".

Claims 3 and those dependent therefrom are indefinite in that they are using a figure as an attempt to describe the structure of the device. This format is indefinite as it does not adequately describe the structure of the invention and one of ordinary skill in the art would not be able to concretely ascertain that which the Applicant is claiming by the figure.

Claim 5 is indefinite in that it does not clearly define the structure being claimed as in a manner to which one of ordinary skill in the art would be able to ascertain what the structure is. The claim is generally narrative and does not properly define which limitation is associated with each part

Claim 6 is indefinite in that one of ordinary skill in the art would not understand what a multiplayer printing method means.

For examination purposes, the claims will be evaluated as best understood by one of ordinary skill in the art.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-5 and 8, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Goodwin et al. (US Patent No. 4,949,972) in view of Bateman (US Patent No. 5,618,044).

Goodwin et al. disclose an electronic target unit that has a housing having a receiving area for movably mounting a target paper (FIG 44). A sensitive target area is provided in said housing that is behind the target paper and provided with a sensing circuit for sensing electronic signals generated when hit by bullets (FIG 4). The sensing circuit is connected to a scoring circuit for counting and providing the score results of the scores to the user on display (Column 8, lines 67-68; Column 9, lines 1-5). Goodwin et al. does not disclose the location of the display, but such a location would be a design choice to one of ordinary skill in the art and one of ordinary skill in the art would be motivated to put it on the housing as it would be obvious that only one piece of manufacture would be required. The system works by allowing the bullets to be shot through the target paper and the bullet is detected by hitting the target area and the results are shown on the display screen.

Goodwin et al. do not disclose a recovering bin that catches the bullets. Bateman discloses a modular system that requires very little space to serve as a bullet trap and

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containment cavity that includes a containment unit for recovering bullets (Abstract). Bateman also discloses it is customary in target practice to provide a means of stopping bullets after they have traveled through a target in order to prevent harm or damage to persons (Column 2, lines 19-25). Bateman discloses using a steel material to stop the bullets (Column 4, lines 30-34) and a containment cavity in which the bullets will be stored (Column 4, lines 23-25). It would have been obvious to one of ordinary skill in the art to incorporate the teachings of Bateman into the device of Goodwin et al. By applying the teachings of Bateman, one of ordinary skill in the art would understand that a plate and containment unit could be added to the device of Goodwin et al. One of ordinary skill in the art would be motivated to make this incorporation, as taught by Bateman, to stop bullets after they travel through the target in order to prevent harm. Further, one of ordinary skill in the art would be motivated to do this in the instance that the target were used for BBs. In this instance, one of ordinary skill in the art would be motivated to apply the teachings of Bateman in order to enable the user would be able to preserve BBs after use.

Regarding claim 2, Goodwin et al. disclose an opening at the position ahead of the hitting area. Enclosing the walls around the housing forms the bullet passage. Goodwin et al. does not disclose a cover; however, such a feature would be a supplemental design choice, obvious to one of ordinary skill in the art. Covers are known in dartboards and one of ordinary skill in the art would be motivated to incorporate such a cover in order to provide a means of protection for the electronic equipment of the device when it is not in use. Bateman discloses the collection tray is located below the target device (FIG 1, reference 7) as a drawer. Bateman does not disclose a notch is provided for movably inserting the bin into a drawer. However, such a feature would be a design choice would be obvious to one of ordinary skill in the art. By allowing the drawer to

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slide in and out of its recess, it would allow easier access to the stored bullets and thus provide a convenience for the user and motivation to one of ordinary skill in the art to incorporate such a feature.

Regarding claim 3, the structure of Goodwin et al. includes shaped rails in the form shown by the figure in the claim at the sides of the opening and the target paper can be inserted therein (FIG 4, FIG 5, and FIG 12).

Regarding claims 4 and 8, Goodwin et al. discloses that the target paper has a supporting frame provided around the periphery (FIG 4) and a receiving area on the housing is recessed (FIG 4) and forms a step.

Regarding claim 5, Bateman discloses that the material is vibration absorbing and when applying such teachings to Goodwin et al., one of ordinary skill in the art would understand that the target area is thus vibration absorbing. The method in which the scoring is achieved would be a design choice to one of ordinary skill in the art and thus such adaptations such as using photosensitive means to detect the bullets would be obvious to one of ordinary skill in the art. A skilled artisan would have the capability to implement other means of detecting the bullets to form a score and thus such implementations would be obvious to such a skilled artisan.

Claim 6, as best understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over Goodwin et al. (US Patent No. 4,949,972) in view of Bateman (US Patent No. 5,618,044) further in view of Hodge (US Patent No. 5,516,113).

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Goodwin et al. in view of Bateman discloses the target area being made of vibration absorbing material and the sensing circuit is that of a light detector. It is not disclosed that the detection is made by a printing method.

Hodge discloses a sensing means for a target wherein the circuit board is printed with a number of resistors in a grid formation. The grid is then used to determine the position that was hit by the projectile. It would have been an obvious design choice to one of ordinary skill in the art to use the printed grid of Hodge instead of light beams grid by mounting the grid on the vibration resistant material. Both determine the location of the projectile and can provide the information to the computer. Thus, substituting a printed grid in place of the light beams would have been an obvious alternative to one of ordinary skill in the art.

Claim 7, as best understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over Goodwin et al. (US Patent No. 4,949,972) in view of Bateman (US Patent No. 5,618,044) further in view of Beall et al. (US Patent No. 4,974,857).

Goodwin et al. in view of Bateman do not disclose that the system includes an acoustic electrical circuit for making sounds when the board is hit.

Neither Goodwin et al. nor Bateman disclose an audible sound used when the board is hit. Beall et al. disclose a target game wherein an audible announcing device is used that can announce the values of hits to the player (FIG 5). Beall et al. do not specifically disclose a horn sounding but the type of audible alert would be obvious and easily changed by one of ordinary skill in the art. Further, it would have been obvious to one of ordinary skill in the art to include an audible alert for making sounds when the board is hit in order to easily alert the player when a



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hit is made. The incorporation of audible noises upon a hit is a design choice and one of ordinary skill in the art would be motivated to use this audible alert in order to provide a further convenience in alerting the player that they have made a hit on the target, thus increasing the excitement of the game to the player.

### *Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

**US Patent No. 4,357,351:** Apparatus for marksmanship that allows the user to view automatically the position of the strike.

**US Patent Application Publication 2002/0070501:** Electronic dart game that sense the area in which the dart was hit that has a number of circles that each enclose an area and use a sensing means to determine which area the dart is in.

**US Patent No. 4,786,058:** Electric indicating target for use in shooting practice that has electrical resistance elements on the target paper.

**US Patent No. 4,129,299:** Target scoring apparatus for detecting hits on a target regardless of location.

**US Patent No. 5,944,317:** Automatic gunnery system that responds to shots and can detect the hit location on the target.

**US Patent No. 6,588,759:** Target backstop of collecting bullets after being shot at the target.

**US Patent No. 3,788,059:** Automatic gunnery scoring system responsive to a bullet hitting a target.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to C. Marks whose telephone number is (703)-305-7497. The examiner can normally be reached on Monday - Thursday (7:30AM - 5:30 PM).


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Teresa J Walberg can be reached on (703)-308-1327. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-308-1148.



cmm

September 24, 2003

  
Teresa Walberg  
Supervisory Patent Examiner  
Group 3700